

12/27/99  
JIC640 U.S. PTO12-29-99  
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<b>UTILITY</b> <b>PATENT APPLICATION</b> <b>TRANSMITTAL</b> <small>(Only for new nonprovisional applications under 37 CFR 1.53(b))</small>		Attorney Docket No.: D/99477	Total Pages:
		First Named Inventor or Application Identifier	
		Carl H. Hauser	
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<b>APPLICATION ELEMENTS</b>		Assistant Commissioner for Patents Box Patent Application Washington, DC 20231			
See MPEP Chapter 600 concerning utility patent application contents.		ADDRESS TO:			
<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form (Submit an original, and a duplicate for fee processing)</p> <p>2. <input checked="" type="checkbox"/> Specification (incl. claims) (Total Pages: 13)</p> <p>3. <input checked="" type="checkbox"/> Drawing(s) (35 USC 113) (Total Sheets: 2)</p> <p><input checked="" type="checkbox"/> Informal    <input type="checkbox"/> Formal</p> <p>4. <input checked="" type="checkbox"/> Oath or Declaration (Total Pages: 2)</p> <p>a. <input checked="" type="checkbox"/> Newly executed (original or copy)    <input type="checkbox"/> Unexecuted</p> <p>b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 17 completed) <i>[Note Box 5 below]</i></p> <p><input type="checkbox"/> i. <b><u>DELETION OF INVENTOR(S)</u></b> Signed statement attached deleting Inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</p> <p>5. <input type="checkbox"/> Incorporation By Reference <i>(usable if Box 4b is checked)</i> The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.</p>					
<p>6. <input type="checkbox"/> Microfiche Computer Program (Appendix)</p> <p>7. Nucleotide and/or Amino Acid Sequence Submission (If applicable, all necessary)</p> <p>a. <input type="checkbox"/> Computer Readable Copy</p> <p>b. <input type="checkbox"/> Paper Copy (Identical to computer copy)</p> <p>c. <input type="checkbox"/> Statement verifying identity of above copies</p>					
<b>ACCOMPANYING APPLICATION PARTS</b>					
<p>8. <input checked="" type="checkbox"/> Assignment Papers (cover sheet &amp; document(s))</p> <p>9. <input type="checkbox"/> 37 CFR 3.73(b) Statement    <input type="checkbox"/> Power of Attorney (when there is an assignee)</p> <p>10. <input type="checkbox"/> English Translation Document (if applicable)</p> <p>11. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449    <input type="checkbox"/> Copies of IDS Citations</p> <p>12. <input type="checkbox"/> Preliminary Amendment</p> <p>13. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Should be specifically itemized)</p> <p>14. <input type="checkbox"/> Small Entity Statement(s)    <input type="checkbox"/> Statement filed in prior application, Status still proper and desired</p> <p>15. <input type="checkbox"/> Certified Copy of Priority Document(s) (If foreign priority is claimed)</p> <p>16. <input type="checkbox"/> Other:</p>					
<p>17. <input type="checkbox"/> If a <b>CONTINUING APPLICATION</b>, check appropriate box and supply the requisite information:  <input type="checkbox"/> Continuation    <input type="checkbox"/> Divisional    <input type="checkbox"/> Continuation-in-part (CIP)    of prior application No: /</p>					
<b>18. CORRESPONDENCE ADDRESS</b>					
<input type="checkbox"/> Same as prior application		<input checked="" type="checkbox"/> Correspondence address below			
NAME	John E. Beck				
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COUNTRY	U.S.A.	TELEPHONE	650-812-4268	FAX	716-423-5240 or 716-423-2750

Attorney Docket No. **D/99477**

19.  Cancel in this application original claims: \_\_\_\_\_ of the prior application before calculating the filing fee.  
(At least one original independent claim is retained for this filing).
20.  The filing fee is calculated below:

<b>CLAIMS AS FILED, LESS ANY CLAIMS CANCELED BY ABOVE-INDICATED AMENDMENT(S)</b>				
<b>(1) FOR</b>	<b>(2) NUMBER FILED</b>	<b>(3) NUMBER EXTRA</b>	<b>(4) RATE</b>	<b>(5) CALCULATIONS</b>
TOTAL CLAIMS (37 CFR 1.16(c))	8 - 20 =	0	x \$ 18	= \$0.00
INDEPENDENT CLAIMS (37 CFR 1.16(b))	4 - 3 =	1	x \$ 78	= \$78.00
MULTIPLE DEPENDENT CLAIMS (IF APPLICABLE) (37 CFR 1.16(d))		ANY -- 0	\$ 260	= \$0.00
BASIC FEE (37 CFR 1.16(a))				\$760.00
TOTAL				\$ 838.00

21.  The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Account No. 24-0025. An additional copy of this form is enclosed.
22.  This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.
23.  Amend the specification by inserting before the first line the sentence:  
--This application is a  continuation  continuation-in-part  divisional  
of Application(s). , filed .--
24.  A CIP declaration is enclosed.
25.  Power of Attorney
- The power of attorney appears in the original papers of the enclosed prior application.
  - Enclosed is a copy of the declaration and power of attorney from the enclosed prior application.
  - A new declaration with power of attorney is enclosed.

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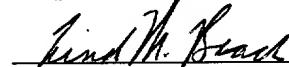
**UTILITY PATENT APPLICATION TRANSMITTAL - 37 CFR 1.53(b)**  
(Executed Attachment to Page 1)

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26.  The following inventors named in the prior application are deleted per 37 CFR 1.53(b)(1), 1.63(d)(2) and 1.33 (b):
27.  This application is adding one or more inventors under 37 CFR 1.48 to a previously executed application, with an enclosed: petition, fee, newly executed declaration from all inventors, and written consent of the assignee.
28.  This application claims the priority benefit of one or more Provisional Application No(s). and the first sentence of this application has been or will be amended to so indicate.
29.  Priority is claimed from  
(reinsert all previous priority claims for the entire chain of any prior applications).
30.  Other paper(s) enclosed:

Respectfully submitted,



Linda M. Beach  
Signature per 37 CFR 1.33 & 34  
Date: 12/27/1999  
Registration No. 36,446  
Telephone No. 650-812-4268

## PERSONAL DOCUMENT MANAGEMENT SYSTEM

### FIELD OF THE INVENTION

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The present invention relates to the field of document management, and more particularly, to a system for providing document management for the organization, handling, and retention of personal documents.

### BACKGROUND

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Financial documents commonly found in the home such as bills, invoices, receipts, bank and brokerage statements, and tax records tend to pile up over time and become difficult to manage effectively. The volume of paper itself becomes a storage problem, and if the person's house is destroyed in a disaster such as an earthquake or 15 fire, the owner of the documents can lose valuable records and financial information.

15

Existing approaches for managing personal documents include Internet banking and bill payment web sites, spreadsheet programs, and software for organizing electronic documents. One problem with existing approaches is that they do not relate the different types of documents to each other. Existing systems also do not provide a 20 centralized repository for storing and managing documents. Accordingly, there is a need in the art for a personal document management system that provides centralized organization, handling, and retention capabilities.

## SUMMARY

The present invention provides a document management system that provides centralized organization, handling, and retention capabilities. Documents in paper and electronic document format are loaded into the system, important information is extracted, and the documents are handled appropriately based on knowledge about the information flow between documents and the transactions that are associated with each document. Document specific handling procedures use the extracted information to relate documents to each other and to provide information about activities related to the documents, for example, bill-payment. Decisions about when to keep and when to discard documents are made in order to determine which documents should be backed up to a secondary or remote location for later retrieval. Documents that are to be kept are downloaded via the system's centralized backup capability, thus allowing a user to download documents to a location outside the home or office, allowing for retrieval if the original documents are destroyed.

## 15 BRIEF DESCRIPTION OF THE DRAWINGS

A more complete appreciation of the invention and many of its attendant advantages will be readily obtained and understood by referring to the following detailed description and the accompanying drawings in which like reference numerals denote like elements as between the various drawings. The drawings are briefly described 20 below.

FIG. 1 is a block diagram illustrating a personal document management system in an embodiment of the present invention.

FIG. 2 is a flowchart illustrating steps that are performed in a method for managing personal documents in an embodiment of the present invention.

## 5 DETAILED DESCRIPTION

An embodiment of the present invention provides a system for personal document management. The system of the present invention performs methods that may be implemented on a computer system having a computer-readable medium and may be performed using computer-executable instructions. The computer-executable instructions may be included in a computer program product. The methods may also include transferring a computer program product from one or more first computers to one or more second computers through a communications medium.

FIG. 1 is a block diagram 100 illustrating a document management system in an embodiment of the present invention. Such a document management system would be useful for personal documents or in a small office/home office (SOHO) environment. Document management system 100 includes a local computer system 102, such as a personal computer and a remote computer system 104 such as that provided by an off-site Internet service provider. Local computer system 102 and remote computer system 104 are connected to each other through a communications network 106. The local computer system 102 includes a processor 108 having local storage 110. Storage 110 includes an operating environment 112 and software 114 configured to provide

document handling according to an embodiment of the present invention. Local computer system 102 also includes a scanner 116 and other input devices 118, such as a keyboard or a computer-readable medium. Paper documents 120 are input to the system via the scanner 116, which converts the documents to electronic format and 5 loads them into the storage 110. Electronic documents (not shown) may be loaded into storage 110 without being scanned, via input 118 to processor 108. Local computer system 102 also includes an output device 122, for example a printer or a display device that is connected to processor 108.

Remote computer system 104 may be used for securely backing up documents 10 to be retained. The documents to be retained are organized for effective use and are securely backed up to remote computer system 104 using a communications network 106, such as the Internet. Remote computer system 104 includes a processor 124 that is connected to a remote storage device 126. One reason for backing up the documents to another location such as remote computer system 104 is to provide the 15 ability to retrieve the information contained in the documents in case any of the original documents or the documents loaded onto computer system 102 are lost or destroyed.

FIG. 2 is a flowchart 200 illustrating an example of steps that may be performed in a method for managing personal documents in an embodiment of the present invention. The method begins, step 202, and a document is loaded, step 204. The 20 document may be loaded by being retrieved electronically (for example, from a disk or from the Internet) or the document may be loaded by being scanned in from a paper document. The document has a format and a category associated with it, each

described further below. The format indicates whether the document is in paper or electronic form. The category relates to the function of the document. For example, some document categories include bills, invoices, receipts, bank and brokerage statements, tax returns, product warranties and checks. Categories such as bills and  
5 receipts may be divided up into subcategories such as credit card, utility, mortgage, or insurance. Miscellaneous categories may also be set up, step 212 described further below, so that the user may define categories that are not already defined in the system, for example documents coming from an external source such as business trip receipts.

10       Once the document is loaded, step 204, the document is then characterized, step 206, to determine the document category. Categorizing a document may be done in numerous ways. The content of the document, or data items included in the document, might be used to characterize it. For example, one might search for a data item such as a bank account number to find a bank statement, or one might search for  
15 a data item such as the name of a company (such as the utility company) to find a bill. The shape of the document might be used separately or in conjunction with the document content to categorize the document. For example, long and skinny documents often are receipts such as a purchase receipt or an ATM machine receipt. Alternatively, the user could identify a pattern that may be used for categorizing the  
20 document. For example, a user could specify what a document is when it is input to the system and label the document as belonging to a particular category, such as a bill, a statement, etc. The user might also customize the system by training the system to

detect additional document types. This could be done by programming the system to accept and identify additional formats (by using layout or template information), text information (such as an account number or a merchant name), or images in a document (for example a logo).

- 5 An embodiment of the present invention could optionally check to determine whether category-specific procedures are available, step 208. If the procedures are available on the system, then they could be applied to the document, step 210. If no procedures relating to the particular document category are found on the system, then a user might optionally train the system to handle a new category, step 212, by
- 10 customizing the system. After training the system to deal with the category, step 212, the new procedures might then be applied to the document, step 210. If the categorization for the document has changed enough that the procedures do not apply, step 214, then the document might be re-categorized in step 206. Otherwise, processing continues to step 216, where the document information is extracted.
- 15 Category-specific document handling procedures are applied to the document in step 210. The category-specific document handling procedures embody knowledge about flows of information between the documents entered into the document handling system. Documents may be organized by category, by a time component, or by transaction. For example, organization by category might include associating credit
- 20 card receipts with credit card bills and checks that are used to pay the credit card bills. An example of organization by a time component might include keeping a list of credit card statements in order by date. An example of organizing documents by transaction

might include associating the warranties on purchased items with the receipts from the sale of the item and/or the credit card bill showing the purchase of the item. Checks and ATM receipts and their amounts may be associated with bank statements. One way of associating checks with bank account statements is to use the standard line at 5 the bottom of a check that includes the account number and the amount that the check was cashed for. Trade confirmations may be associated with brokerage account statements.

Knowledge about how these documents relate to home activities such as filing tax returns, making insurance claims, and contesting bills, might also be reflected in the 10 document handling procedures. A set of category-specific handling rules may be implemented in the document handling system by default, and may be customized to meet a particular user's needs.

Based on the document category, information is extracted from the document, step 216. The information that may be extracted from the documents include for 15 example, account numbers, due dates, check numbers, recipient names, etc. that are associated with the input documents. This information might be extracted by using text searching techniques, image identification techniques, or by identifying the format of a particular document. For example, a credit card bill tends to have the same format from month to month. By taking advantage of the layout of the document, the relevant 20 information such as the account number, the purchases made, and the balance may be extracted based on their usual locations in the layout of the document. A template could be set up to reflect the credit card bill format. This template could be changed

when the credit card company changes the format of the bill. Credit card companies could even make their bill formats accessible via the Internet so that the user can download it into the document system so that the relevant information may be extracted accurately.

- 5       The information extracted in step 216 might be used to link the document to other related documents, step 218. Optionally, documents may be backed up and retained, step 220, after which processing ends, step 222. Using the knowledge referred to above, an embodiment of the present invention also may be used to guide a user in setting up and carrying out a retention plan for home documents. Document
- 10      retention is a valuable feature because it provides the user the ability to retrieve the retained document information if the original documents are lost, stolen or destroyed. The decision to retain and backup a document, step 220 is based on the document's category, age, and other information that a user might input into the system. Document retention rules reflect the fact that documents typically lose their usefulness after a long
- 15      enough period of time. For example, it is not necessary to keep tax records after approximately seven years, so a user may wish to dispose of them or not back them up to off-site storage. Also a user may wish to override and change any default document retention rules to fulfill a particular need, such as a desire to keep some documents private by not backing them up to a remote system on the Internet. In order to retrieve
- 20      documents that have been backed up, the user simply accesses the remote computer system 104 and downloads them onto the local computer system 102 through the network 106.

While the embodiments of the present invention described herein have focused on personal document management featuring specific examples of financial document handling and Internet backup capability, other types of documents and backup methods could be used without departing from the spirit and scope of the present invention.

- 5 Thus, it should be appreciated that the above description is merely illustrative, and should not be read to limit the scope of the invention or the claims.

What is claimed is:

1. A computer-implemented method for managing personal documents, comprising:

loading a document into storage, said document having a category;  
determining the document category;  
receiving at least one processing rule, wherein the rule is associated with the document category; and  
processing the document according to the processing rule.

2. The computer-implemented method of claim 1, wherein the processing rule includes retention criteria for determining how long to save the document.

3. A computer system having a processor, a display and memory, the memory including an operating environment, and a computer-readable medium having computer-executable instructions for performing a method of managing personal documents, comprising:

computer-executable instructions for loading a document into storage, said document having a category;  
computer-executable instructions for determining the document category;  
computer-executable instructions for receiving at least one processing rule, wherein the at least one rule is associated with the document category; and

computer-executable instructions for processing the document according to the processing rule.

4. The computer system of claim 3, wherein the processing rule includes retention criteria for determining how long to save the document.

5. A computer program product having a computer-readable medium holding computer-executable instructions for performing a method for managing personal documents, the method comprising:

loading a document into storage, said document having a category;  
determining the document category;  
receiving at least one processing rule, wherein the rule is associated with the document category; and  
processing the document according to the processing rule.

6. The computer program product of claim 5, wherein the processing rule includes retention criteria for determining how long to save the document.

7. A method for transferring a computer program product from one or more first computers to a second computer connected to the one or more first computers through a communications medium, comprising:

(a) accessing, on the one or more first computers, computer-executable instructions, which when executed by a computer, perform the steps of:

(1) loading a document into storage, said document having a category;

(2) receiving at least one processing rule, wherein the rule is associated with the document category; and

(3) processing the document according to the processing rule; and

(b) transferring the computer-executable instructions from the one or more first computers to the second computer through the communications medium.

8. The method of claim 7, wherein the processing rule includes retention criteria for determining how long to save the document.

## **PERSONAL DOCUMENT MANAGEMENT SYSTEM**

### **ABSTRACT OF THE DISCLOSURE**

A system for managing personal documents is provided that includes centralized organization, handling, and retention capabilities. Documents in paper and electronic document format are loaded into the system, important information is extracted, and the documents are handled appropriately based on knowledge about the information flow between documents and the transactions that are associated with each document. Document retention criteria may be applied to determine which documents should be backed up to a secondary or remote location for later retrieval in case the original documents are destroyed.

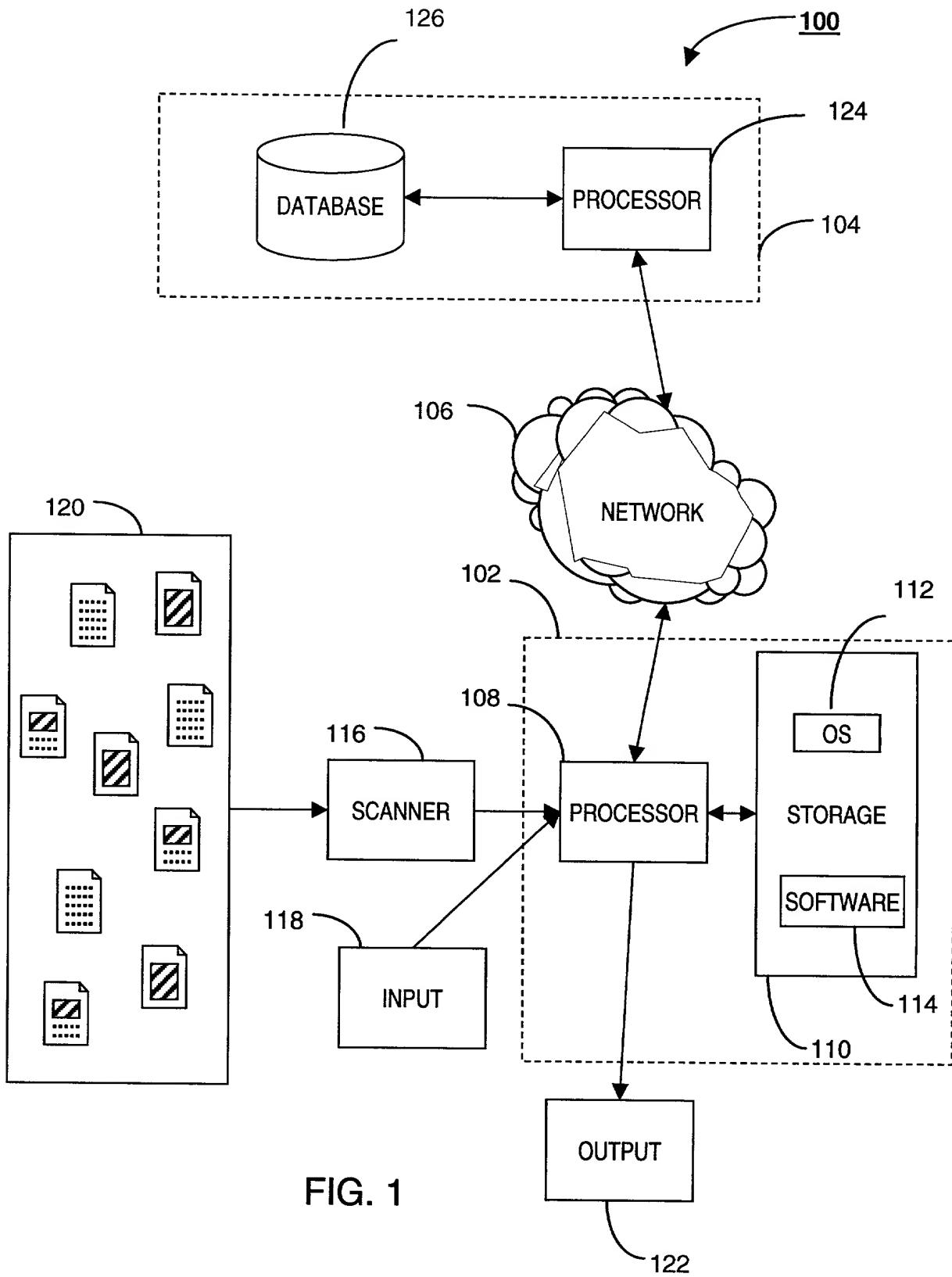


FIG. 1

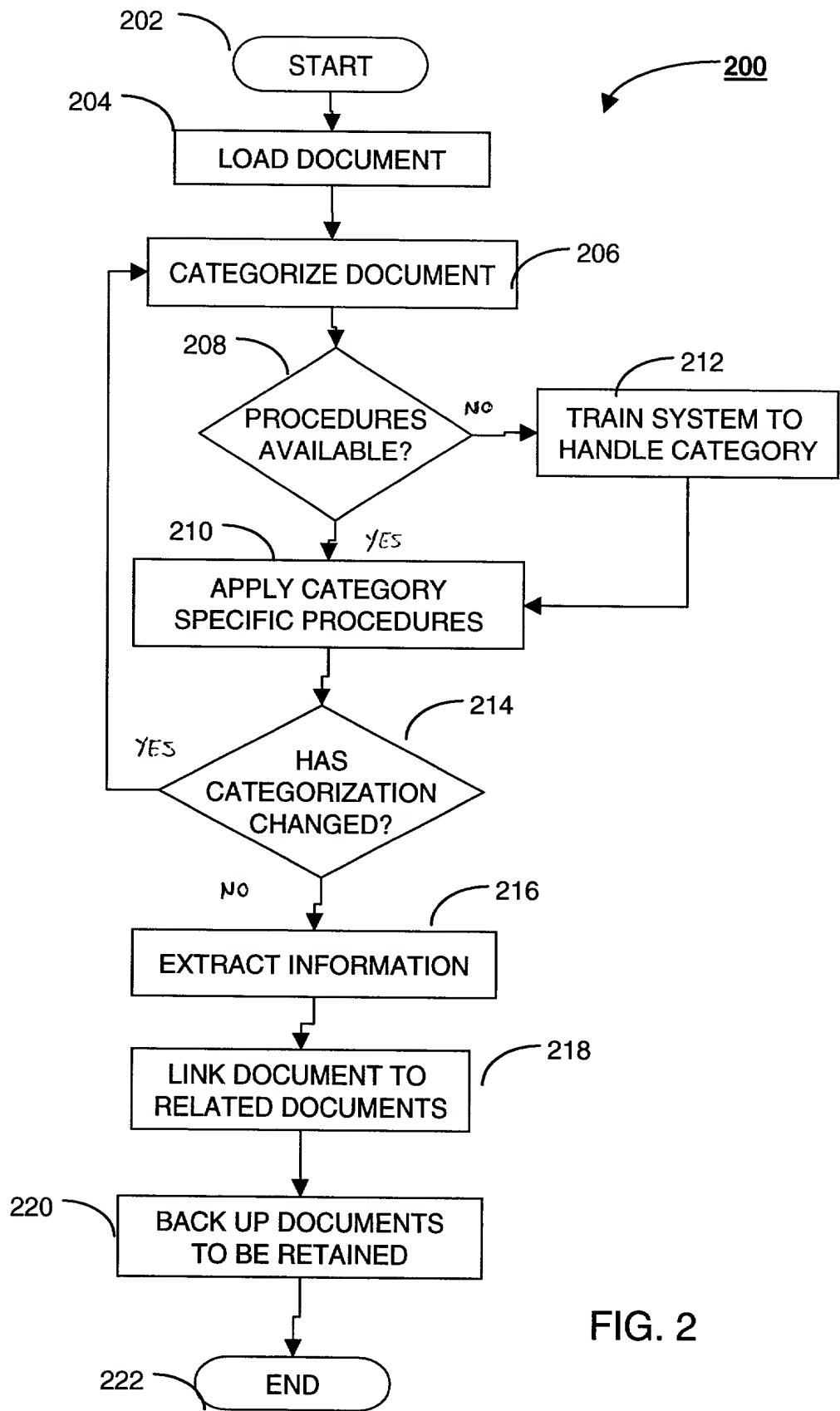


FIG. 2

PATENT APPLICATION

Attorney Docket No. D/99477

**DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **PERSONAL DOCUMENT MANAGEMENT SYSTEM**

the specification and claims of which

are attached hereto      OR       was filed on \_\_\_\_\_ as U.S. Application No. \_\_\_\_\_

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim priority benefits under Title 35, United States Code, §119 of any foreign or U.S. Provisional application(s) for patent listed below, and have also identified below any foreign application(s) or Provisional application(s) for patent having a filing date before that of the application on which priority is claimed:

Prior Foreign or U.S. Provisional Application(s)

(Number)	(Country)	(Day/Month/Year Filed)
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**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following registered practitioners to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

John E. Beck	Reg. No. 22,833;	Henry Fleischer	Reg. No. 25,582;
Ronald F. Chapuran	Reg. No. 26,402;	Mark Costello	Reg. No. 31,342;
Jonathan A. Small	Reg. No. 32,631;	Eugene O. Palazzo	Reg. No. 20,881
Richard B. Domingo	Reg. No. 36,784;	Linda M. Beach,	Reg. No. 36,446

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DIRECT TELEPHONE CALLS TO:  
(name and telephone number)  
Linda M. Beach  
650-812-4268

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

**DECLARATION AND POWER OF ATTORNEY, continued**

Name of sole or first inventor: Carl H. Hauser

Inventor's Signature:

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Citizenship: U.S.A.

Date: December 23, 1999

Post Office Address:

(Same as above)